REMARKS

Claims 1-16 are pending herein. Claims 1, 2, 5 and 6 have been amended to correct matters of form. Attached hereto as page 9, pursuant to Rule 1.121(c)(1)(ii), is a marked-up version of the amended claims.

New claims 7-16 have been added to recite the subject matter of the multiple dependent claims that were amended when this application was filed. Claim 7 corresponds to claim 3 and depends from claim 2. Claims 8 and 9 correspond to claim 4 and depend from claims 2 and 3, respectively. Claims 10-12 correspond to claim 5 and depend from claims 2-4, respectively. Claims 13-16 correspond to claim 6 and depend from claims 2-5, respectively.

Examiner Patel is thanked for courtesies extended to Applicants' representative during a telephonic interview on June 6, 2002. During the interview, Examiner Patel agreed to withdraw the objection to the specification and rejection of claims 1-6 under §112, which are discussed below in detail in paragraph 2.

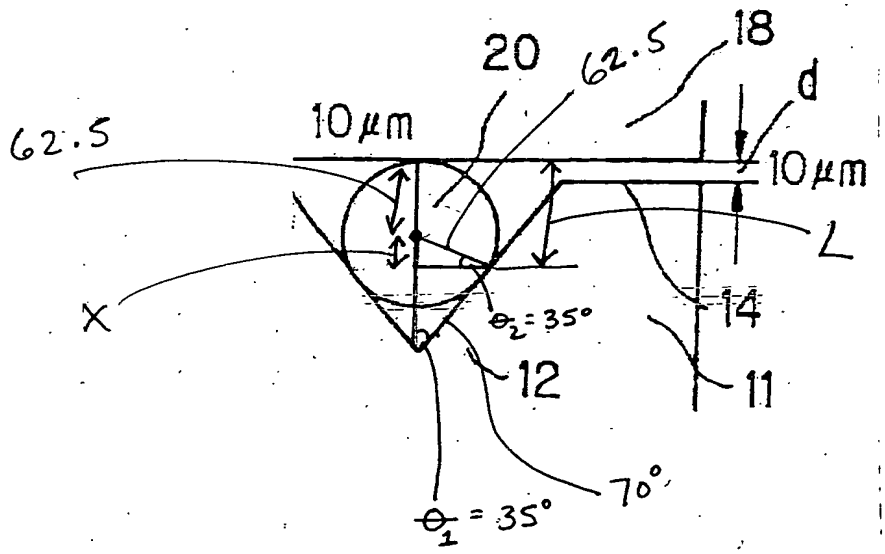
1. The objection to Fig. 4 is noted, but deemed moot in view of the Submission of New Formal Drawings filed herewith.

2. The Examiner objected to the specification under §112, first paragraph, and rejected claims 1-6 under §112, second paragraph. Page 4 of the present specification and claims 1 and 3 recite the following inequality equations: $L / 6 \leq Y \leq L$; and $L / 4 \leq Y \leq L$. During the above-mentioned telephonic interview, and with reference to Fig. 1 of the present application, Applicants' representative explained that if a distance L between contact point P and the bottom surface of cover plate 5 is assigned the numerical value of 1 mm, for example, the equation would read 1/6 mm $\leq Y \leq 1$ mm. This would mean that adhesive layer 6 would have a thickness Y which ranges between 1/6 mm and 1 mm. A search of the USPTO

website revealed that the use of such inequalities in patent claims is commonplace under current PTO practice and procedure. As explained above, based on the discussion during the telephonic interview, Examiner Patel agreed to withdraw the objection to the specification and rejection of claims 1-6 under §112.

3. Claims 1-3 were rejected under §103(a) over Fukuyama et al. This rejection is respectfully traversed.

Fukuyama does not disclose, expressly or inherently, the numerical limitations recited in claims 1 and 3, which were discussed above in detail with respect to the §112 rejections asserted in the Office Action. An annotated version of a portion of Fukuyama's Fig. 3 is reproduced below.



As indicated in paragraph 7 of the Office Action, the diameter of Fukuyama's optical fiber is 125 μm, which means that the radius (R) of the optical fiber is 62.5 μm, and the angle of Fukuyama's V-groove is 70°, which makes θ_1 equal to 35°. Consequently, θ_2 shown in the annotated drawing is also 35°. The portion of Fukuyama's holding member that corresponds to (L), the claimed distance between contact point (P) and housing groove (4) and a surface of

cover plate (5) is equal to X + R, with R being equal to 62.5 μm. "X" is equal to X= (sin 35°)(R) = 35.8 μm. Accordingly, in Fukuyama, L would equal 35.8 μm + 62.5 μm, or 98.3 μm. Since Fukuyama discloses that adhesive thickness (d), which corresponds to adhesive thickness (Y) recited in each of claims 1 and 3, is 10 μm, adhesive thickness (d) is not at least 1/6 of distance (L), as claimed. Instead, as is clear from the above calculations based on the disclosure in Fukuyama, (d) is around 1/10 of distance (L).

In view of the foregoing, reconsideration and withdrawal of the rejection of claims 1-3 under §103(a) over Fukuyama et al. are respectfully requested.

4. Claims 4-6 were rejected under §103(a) over Fukuyama in view of EP 943,942. Applicants respectfully submit that the arguments submitted above distinguish claim 1 from Fukuyama. Since EP 943,942 does not overcome the deficiencies of Fukuyama, and since claims 4-6 depend directly from claim 1, claims 4-6 are also believed to be allowable over the applied art.

If Examiner Patel believes that contact with Applicants' attorney would be advantageous toward the disposition of this case, he is herein requested to call Applicants' attorney at the phone number noted below.

The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-1446.

Respectfully submitted,

August 15, 2002
Date

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1. (Amended) An optical fiber array, comprising: a holding member ~~that consists of~~including a substrate ~~forming a~~having sectional V-shaped housing grooves formed thereon for housing ~~an~~ optical fibers on a top face, said optical fibers each having an optical fiber tip end bare portion housed in said holding member~~,~~; a cover plate positioned on the substrate; and ~~filling~~ an adhesive provided between the substrate and athe cover plate ~~so as~~ to fix the optical fibers ~~to~~in the housing grooves, wherein a distance between a center axis of the outermost housing groove ~~that is an outermost portion~~ and an end portion of the substrate is at least five~~5~~ times ~~or more~~ larger than the radium of the optical fibers, and a distance Y between the substrate and the cover plate is $L / 6 \leq Y \leq L$, wherein Y is a thickness of the adhesive and L is ~~relevant to~~ a distance ~~L~~ from a contact point between the housed optical fibers and the housing groves to the cover plate.

2. (Amended) An optical fiber array as claimed in claim 1, wherein a height of a portion of the optical fibers which protrudes~~site protruding~~ from the housing grooves on the substrate ~~of the optical fiber housed in the housing groove~~ is substantially equal to the distance Y between the substrate and the cover plate.

5. (Amended) An optical fiber array as claimed in claim 1, wherein ~~the~~a width of the cover plate is different from ~~that~~a width of the substrate.

6. (Amended) An optical fiber array as claimed in claim 1, ~~wherein~~further comprising a placement face for placing a covered portion of the optical fibers ~~is~~ provided at ~~the~~a rear part of a housing groove forming face, and a step ~~is~~ provided between the housing groove forming face and the placement face~~, thereby~~ for placing and housing the optical fibers.

VERSION WITH MARKINGS TO SHOW CHANGES MADE
Amended claims

ABSTRACT OF THE DISCLOSURE

An optical fiber array is provided in which an optical fiber tip end is housed in a holding member (2). The holding member (2) consists of a substrate (3) and a cover plate (5). The substrate (3) forms a sectional V shaped housing groove ~~(V-groove~~ (4) for housing the optical fiber (1) on ~~the~~a top face. The ~~substrate~~cover plate (5) covers the top face of the substrate (3). ~~Then, a~~An adhesive is filled between the substrate (3) and the cover plate (5)~~,~~ which ~~and an~~fixes optical fiber (1) ~~is fixed~~ in the housing groove. ~~At this time, a~~A distance Y between the substrate (3) and the cover plate (5) is $L / 6 \leq Y \leq L$, with Y being the thickness of the adhesive layer and ~~relevant to~~ L being a distance ~~L~~ from a contact point (P)between the housed optical fiber (1) and the housing groove (4) to the cover plate (5). In this manner, even under severer environmental conditions, a release or delamination of the holding member (2)~~or the~~ is not likely ~~hardly~~to occurs, and good optical coupling characteristics ~~are~~can be maintained.

~~Additional advantages and modifications will readily occur to those skilled in the art. Therefore, the invention in its broader aspect is not limited to the specific details and representative embodiments shown and described herein. Accordingly, various modifications may be made without departing from the spirit or scope of the general inventive concept as defined by the appended claims and their equivalents.~~

VERSION WITH MARKINGS TO SHOW CHANGES MADE
Amended abstract